ZERO TO ONE

1. The Challenge of the Future
    a. "What important truth do very few people agree with you on?"
    b. Brilliant thinking is rare, but courage is in even shorter supply than genius.
    c. A good answer takes the following form: "Most people believe in x, but the truth is the opposite of x."
    d. Horizontal or extensive progress means copying things that work— going from 1 to n.
    e. Vertical or intensive progress means doing new things— going from 0 to 1.
    f. My own answer to the contrarian question is that most people think the future of the world will be defined by globalization, but the truth is that technology matters more.
    g. In the most dysfunctional organizations, signaling that work is being done becomes a better strategy for career advancement than actually doing work (if this describes your company, you should quit now).
    h. Startups operate on the principle that you need to work with other people to get stuff done, but you also need to stay small enough so that you actually can.
    i. Positively defined, a startup is the largest group of people you can convince of a plan to build a different future.

2. Party Like It's 1999
    a. If you can identify a delusional popular belief, you can find what lies hidden behind it: the contrarian truth.
    b. And yet the opposite principles are probably more correct:
        i. It is better to risk boldness than triviality.
        ii. A bad plan is better than no plan.
        iii. Competitive markets destroy profits.
        iv. 4Sales matters just as much as product.

c. Instead ask yourself: how much of what you know about business is shaped by mistaken reactions to past mistakes? The most contrarian thing of all is not to oppose the crowd but to think for yourself.

3. <u>All Happy Companies Are Different</u>
    a. The business version of our contrarian question is: what valuable company is nobody building?
    b. Creating value is not enough— you also need to capture some of the value you create.
    c. The lesson for entrepreneurs is clear: if you want to create and capture lasting value, don't build an undifferentiated commodity business.
    d. Non-monopolists exaggerate their distinction by defining their market as the intersection of various smaller markets: British food ∩ restaurant ∩ Palo Alto Rap star ∩ hackers ∩ sharks Monopolists, by contrast, disguise their monopoly by framing their market as the union of several large markets: search engine ∪ mobile phones ∪ wearable computers ∪ self-driving cars
    e. In business, money is either an important thing or it is everything.
    f. Only one thing can allow a business to transcend the daily brute struggle for survival: monopoly profits.
    g. Whatever your views on thermodynamics, it's a powerful metaphor: in business, equilibrium means stasis, and stasis means death.
    h. Monopoly is the condition of every successful business.
    i. All happy companies are different: each one earns a monopoly by solving a unique problem. All failed companies are the same: they failed to escape competition.

4. <u>The Ideology of Competition</u>
    a. All Rhodes Scholars had a great future in their past.

b. Rivalry causes us to overemphasize old opportunities and slavishly copy what has worked in the past.
c. Sometimes you do have to fight. Where that's true, you should fight and win. There is no middle ground: either don't throw any punches, or strike hard and end it quickly.
d. If you can recognize competition as a destructive force instead of a sign of value, you're already more sane than most.

5. <u>Last Mover Advantage</u>
   a. Simply stated, the value of a business today is the sum of all the money it will make in the future. (To properly value a business, you also have to discount those future cash flows to their present worth, since a given amount of money today is worth more than the same amount in the future.)
   b. If you focus on near-term growth above all else, you miss the most important question you should be asking: will this business still be around a decade from now? Numbers alone won't tell you the answer; instead you must think critically about the qualitative characteristics of your business.
   c. Every monopoly is unique, but they usually share some combination of the following characteristics: proprietary technology, network effects, economies of scale, and branding.
   d. This isn't a list of boxes to check as you build your business—there's no shortcut to monopoly. However, analyzing your business according to these characteristics can help you think about how to make it durable.

      i. <u>Proprietary Technology</u>
         1. Proprietary technology is the most substantive advantage a company can have because it makes your product difficult or impossible to replicate.
         2. As a good rule of thumb, proprietary technology must be at least 10 times better than its closest

substitute in some important dimension to lead to a real monopolistic advantage.

3. Anything less than an order of magnitude better will probably be perceived as a marginal improvement and will be hard to sell, especially in an already crowded market.
4. The clearest way to make a 10x improvement is to invent something completely new.
5. Or you can radically improve an existing solution: once you're 10x better, you escape competition.
6. You can also make a 10x improvement through superior integrated design.

ii. <u>Network Effects</u>

1. Network effects make a product more useful as more people use it.
2. Network effects can be powerful, but you'll never reap them unless your product is valuable to its very first users when the network is necessarily small.
3. This is why successful network businesses rarely get started by MBA types: the initial markets are so small that they often don't even appear to be business opportunities at all.

iii. <u>Economies of Scale</u>

1. A monopoly business gets stronger as it gets bigger: the fixed costs of creating a product (engineering, management, office space) can be spread out over ever greater quantities of sales.
2. A good startup should have the potential for great scale built into its first design.

iv. <u>Branding</u>

v. A company has a monopoly on its own brand by definition, so creating a strong brand is a powerful way to claim a monopoly.

6. <u>BUILDING A MONOPOLY</u>
   a. Brand, scale, network effects, and technology in some combination define a monopoly; but to get them to work, you need to choose your market carefully and expand deliberately.
   b. Every startup is small at the start. Every monopoly dominates a large share of its market. Therefore, every startup should start with a very small market.
   c. The perfect target market for a startup is a small group of particular people concentrated together and served by few or no competitors.

7. <u>Scaling Up</u>
   a. Once you create and dominate a niche market, then you should gradually expand into related and slightly broader markets.
   b. The most successful companies make the core progression— to first dominate a specific niche and then scale to adjacent markets— a part of their founding narrative.
   c. As you craft a plan to expand to adjacent markets, don't disrupt: avoid competition as much as possible.

8. <u>You Are Not a Lottery Ticket</u>
   a. But they miss the even bigger social context for their own preferred explanations: a whole generation learned from childhood to overrate the power of chance and underrate the importance of planning.
   b. Finance epitomizes indefinite thinking because it's the only way to make money when you have no idea how to create wealth.

c. But in an indefinite world, people actually prefer unlimited optionality; money is more valuable than anything you could possibly do with it. Only in a definite future is money a means to an end, not the end itself.
d. It's no surprise that entitlement spending has eclipsed discretionary spending every year since 1975.
e. In philosophy, politics, and business, too, arguing over process has become a way to endlessly defer making concrete plans for a better future.
f. But leanness is a methodology, not a goal. Making small changes to things that already exist might lead you to a local maximum, but it won't help you find the global maximum.
g. A company is the strangest place of all for an indefinite optimist: why should you expect your own business to succeed without a plan to make it happen? Darwinism may be a fine theory in other contexts, but in startups, intelligent design works best.
h. The greatest thing Jobs designed was his business. Apple imagined and executed definite multi-year plans to create new products and distribute them effectively.
i. A business with a good definite plan will always be underrated in a world where people see the future as random.
j. A startup is the largest endeavor over which you can have definite mastery. You can have agency not just over your own life, but over a small and important part of the world. It begins by rejecting the unjust tyranny of Chance. You are not a lottery ticket.

9. <u>Follow the Money</u>
   a. Never underestimate exponential growth.
   b. Everyone needs to know exactly one thing that even venture capitalists struggle to understand: we don't live in a normal world; we live under a power law.

c. The biggest secret in venture capital is that the best investment in a successful fund equals or outperforms the entire rest of the fund combined.
d. This implies two very strange rules for VCs. First, only invest in companies that have the potential to return the value of the entire fund. This is a scary rule, because it eliminates the vast majority of possible investments.
e. This leads to rule number two: because rule number one is so restrictive, there can’t be any other rules.
f. total VC investment accounts for less than 0.2% of GDP. But the results of those investments disproportionately propel the entire economy. Venture-backed companies create 11% of all private sector jobs. They generate annual revenues equivalent to an astounding 21% of GDP. Indeed, the dozen largest tech companies were all venture-backed. Together those 12 companies are worth more than $2 trillion, more than all other tech companies combined.
g. “it doesn’t matter what you do, as long as you do it well.” That is completely false. It does matter what you do. You should focus relentlessly on something you’re good at doing, but before that you must think hard about whether it will be valuable in the future.
h. If you do start your own company, you must remember the power law to operate it well. The most important things are singular: One market will probably be better than all others, as we discussed in Chapter 5. One distribution strategy usually dominates all others, too— for that see Chapter 11. Time and decision-making themselves follow a power law, and some moments matter far more than others— see Chapter

10. <u>Secrets</u>

a. Four social trends have conspired to root out belief in secrets.

b. **First is incrementalism**. From an early age, we are taught that the right way to do things is to proceed one very small step at a time, day by day, grade by grade.

c. **Second is risk aversion**. People are scared of secrets because they are scared of being wrong. By definition, a secret hasn't been vetted by the mainstream.

d. **Third is complacency**. Social elites have the most freedom and ability to explore new thinking, but they seem to believe in secrets the least.

e. **Fourth is "flatness."** As globalization advances, people perceive the world as one homogeneous, highly competitive marketplace: the world is "flat." Given that assumption, anyone who might have had the ambition to look for a secret will first ask himself: if it were possible to discover something new, wouldn't someone from the faceless global talent pool of smarter and more creative people have found it already?

f. We can be glad that there are fewer crazy cults now, yet that gain has come at great cost: we have given up our sense of wonder at secrets left to be discovered.

g. The actual truth is that there are many more secrets left to find, but they will yield only to relentless searchers.

h. Great companies can be built on open but unsuspected secrets about how the world works.

i. There are two kinds of secrets: secrets of nature and secrets about people. Natural secrets exist all around us; to find them, one must study some undiscovered aspect of the physical world. Secrets about people are different: they are things that people don't know about themselves or things they hide because they don't want others to know.

j. So when thinking about what kind of company to build, there are two distinct questions to ask: What secrets is nature not telling you? What secrets are people not telling you?

k. So you might ask: are there any fields that matter but haven't been standardized and institutionalized?

l. The best entrepreneurs know this: every great business is built around a secret that's hidden from the outside. A great company is a conspiracy to change the world; when you share your secret, the recipient becomes a fellow conspirator.

11. <u>Foundations</u>

a. "Thiel's law": a startup messed up at its foundation cannot be fixed.

b. FOUNDING MATRIMONY

   i. Now when I consider investing in a startup, I study the founding teams. Technical abilities and complementary skill sets matter, but how well the founders know each other and how well they work together matter just as much. Founders should share a prehistory before they start a company together—otherwise they're just rolling dice.

ii. Most conflicts in a startup erupt between ownership and control— that is, between founders and investors on the board.
iii. In the boardroom, less is more. The smaller the board, the easier it is for the directors to communicate, to reach consensus, and to exercise effective oversight. However, that very effectiveness means that a small board can forcefully oppose management in any conflict. This is why it's crucial to choose wisely: every single member of your board matters.
iv. A board of three is ideal. Your board should never exceed five people, unless your company is publicly held.
v. If you want an effective board, keep it small.

c. ON THE BUS OR OFF THE BUS

i. That's why hiring consultants doesn't work. Part-time employees don't work. Even working remotely should be avoided, because misalignment can creep in whenever colleagues aren't together full-time, in the same place, every day. If you're deciding whether to bring someone on board, the decision is binary. Ken Kesey was right: you're either on the bus or off the bus.

d. CASH IS NOT KING

i. Whenever an entrepreneur asks me to invest in his company, I ask him how much he intends to pay himself. A company does better the less it pays the CEO— that's one of the single clearest patterns I've noticed from investing in hundreds of startups. In no case should a CEO of an early-stage, venture-backed startup receive more than $150,000 per year in salary.
ii. If a CEO doesn't set an example by taking the lowest salary in the company, he can do the same thing by

drawing the highest salary. So long as that figure is still modest, it sets an effective ceiling on cash compensation.

iii. Giving everyone equal shares is usually a mistake: every individual has different talents and responsibilities as well as different opportunity costs, so equal amounts will seem arbitrary and unfair from the start.
iv. Since it's impossible to achieve perfect fairness when distributing ownership, founders would do well to keep the details secret.
v. Anyone who prefers owning a part of your company to being paid in cash reveals a preference for the long term and a commitment to increasing your company's value in the future. Equity can't create perfect incentives, but it's the best way for a founder to keep everyone in the company broadly aligned.
vi. This leads to a second, less obvious understanding of the founding: it lasts as long as a company is creating new things, and it ends when creation stops. If you get the founding moment right, you can do
vii. more than create a valuable company: you can steer its distant future toward the creation of new things instead of the stewardship of inherited success. You might even extend its founding indefinitely.

12. <u>The Mechanics of Mafia</u>

a. "Company culture" doesn't exist apart from the company itself: no company has a culture; every company is a culture. A startup is a team of people on a mission, and a good culture is just what that looks like on the inside.
b. Since time is your most valuable asset, it's odd to spend it working with people who don't envision any long-term future together.

c. So we set out to hire people who would actually enjoy working together. They had to be talented, but even more than that they had to be excited about working specifically with us.

13. <u>RECRUITING CONSPIRATORS</u>

a. Recruiting is a core competency for any company. It should never be outsourced.
b. Why should the 20th employee join your company?
c. Why would someone join your company as its 20th engineer when she could go work at Google for more money and more prestige?
d. Here are some bad answers: “Your stock options will be worth more here than elsewhere.” “You’ll get to work with the smartest people in the world.” “You can help solve the world’s most challenging problems.” What’s wrong with valuable stock, smart people, or pressing problems? Nothing— but every company makes these same claims, so they won’t help you stand out.
e. The only good answers are specific to your company, so you won’t find them in this book. But there are two general kinds of good answers: answers about your mission and answers about your team.
f. Above all, don’t fight the perk war. Anybody who would be more powerfully swayed by free laundry pickup or pet day care would be a bad addition to your team. Just cover the basics like health insurance and then promise what no others can: the opportunity to do irreplaceable work on a unique problem alongside great people.

14. <u>WHAT’S UNDER SILICON VALLEY’S HOODIES</u>

a. From the outside, everyone in your company should be different in the same way.
b. What makes a startup employee instantly distinguishable to outsiders is the branded T-shirt or hoodie that makes him

look the same as his co-workers. The startup uniform encapsulates a simple but essential principle: everyone at your company should be different in the same way— a tribe of like-minded people fiercely devoted to the company's mission.

15. <u>DO ONE THING</u>

a. On the inside, every individual should be sharply distinguished by her work.
b. The best thing I did as a manager at PayPal was to make every person in the company responsible for doing just one thing. Every employee's one thing was unique, and everyone knew I would evaluate him only on that one thing.
c. Eliminating competition makes it easier for everyone to build the kinds of long-term relationships that transcend mere professionalism.
d. The best startups might be considered slightly less extreme kinds of cults. The biggest difference is that cults tend to be fanatically wrong about something important. People at a successful startup are fanatically right about something those outside it have missed.

16. <u>If You Build It, Will They Come?</u>

a. EVEN THOUGH SALES is everywhere, most people underrate its importance.
b. Distribution may not matter in fictional worlds, but it matters in ours. We underestimate the importance of distribution— a catchall term for everything it takes to sell a product— because we share the same bias the A Ship and C Ship people had: salespeople and other "middlemen" supposedly get in the way, and distribution should flow magically from the creation of a good product.
c. But customers will not come just because you build it. You have to make that happen, and it's harder than it looks.

d. In Silicon Valley, nerds are skeptical of advertising, marketing, and sales because they seem superficial and irrational. But advertising matters because it works.
e. In engineering disciplines, a solution either works or it fails. You can evaluate someone else's work with relative ease, as surface appearances don't matter much. Sales is the opposite: an orchestrated campaign to change surface appearances without changing the underlying reality.
f. If anything, people overestimate the relative difficulty of science and engineering, because the challenges of those fields are obvious. What nerds miss is that it takes hard work to make sales look easy.
g. Like acting, sales works best when hidden. This explains why almost everyone whose job involves distribution— whether they're in sales, marketing, or advertising— has a job title that has nothing to do with those things. People who sell advertising are called "account executives." People who sell customers work in "business development." People who sell companies are "investment bankers." And people who sell themselves are called "politicians." There's a reason for these redescriptions: none of us wants to be reminded when we're being sold.
h. Whatever the career, sales ability distinguishes superstars from also-rans.
i. The most fundamental reason that even businesspeople underestimate the importance of sales is the systematic effort to hide it at every level of every field in a world secretly driven by it.
j. If you've invented something new but you haven't invented an effective way to sell it, you have a bad business— no matter how good the product.

17. <u>HOW TO SELL A PRODUCT</u>

a. Superior sales and distribution by itself can create a monopoly, even with no product differentiation. The converse is not true.
b. Two metrics set the limits for effective distribution. The total net profit that you earn on average over the course of your relationship with a customer (Customer Lifetime Value, or CLV) must exceed the amount you spend on average to acquire a new customer (Customer Acquisition Cost, or CAC). In general, the higher the price of your product, the more you have to spend to make a sale— and the more it makes sense to spend it. Distribution methods can be plotted on a continuum:

c. Complex Sales
    i. If your average sale is seven figures or more, every detail of every deal requires close personal attention. It might take months to develop the right relationships. You might make a sale only once every year or two. Then you'll usually have to follow up during installation and service the product long after the deal is done. It's hard to do, but this kind of "complex sales" is the only way to sell some of the most valuable products.
    ii. Complex sales works best when you don't have "salesmen" at all. Palantir, the data analytics company I co-founded with my law school classmate Alex Karp, doesn't employ anyone separately tasked with selling its product. Instead, Alex, who is Palantir's CEO, spends 25 days a month on the road, meeting with clients and potential clients. Our deal sizes range from $1 million to $100 million. At that price point, buyers want to talk to the CEO, not the VP of Sales.
    iii. Businesses with complex sales models succeed if they achieve 50% to 100% year-over-year growth over the course of a decade. This will seem slow to any

entrepreneur dreaming of viral growth. You might expect revenue to increase 10x as soon as customers learn about an obviously superior product, but that almost never happens. Good enterprise sales strategy starts small, as it must: a new customer might agree to become your biggest customer, but they'll rarely be comfortable signing a deal completely out of scale with what you've sold before. Once you have a pool of reference customers who are successfully using your product, then you can begin the long and methodical work of hustling toward ever bigger deals.

d. **Personal Sales**

  i. Most sales are not particularly complex: average deal sizes might range between $10,000 and $100,000, and usually the CEO won't have to do all the selling himself. The challenge here isn't about how to make any particular sale, but how to establish a process by which a sales team of modest size can move the product to a wide audience.

e. **Distribution Doldrums**

  i. In between personal sales (salespeople obviously required) and traditional advertising (no salespeople required) there is a dead zone.

f. **Marketing and Advertising**

  i. Marketing and advertising work for relatively low-priced products that have mass appeal but lack any method of viral distribution.

  ii. Advertising can work for startups, too, but only when your customer acquisition costs and customer lifetime value make every other distribution channel uneconomical.

g. Viral Marketing
   i. A product is viral if its core functionality encourages users to invite their friends to become users too. This is how Facebook and PayPal both grew quickly: every time someone shares with a friend or makes a payment, they naturally invite more and more people into the network.

h. The Power Law of Distribution
   i. One of these methods is likely to be far more powerful than every other for any given business: distribution follows a power law of its own.
   ii. Most businesses get zero distribution channels to work: poor sales rather than bad product is the most common cause of failure. If you can get just one distribution channel to work, you have a great business. If you try for several but don't nail one, you're finished.

i. Selling to Non-Customers
   i. Your company needs to sell more than its product. You must also sell your company to employees and investors.
   ii. Even if your particular product doesn't need media exposure to acquire customers because you have a viral distribution strategy, the press can help attract investors and employees. Any prospective employee worth hiring will do his own diligence; what he finds or doesn't find when he googles you will be critical to the success of your company.

18. EVERYBODY SELLS

a. Nerds might wish that distribution could be ignored and salesmen banished to another planet. All of us want to believe that we make up our own minds, that sales doesn't work on us. But it’s not true. Everybody has a product to sell— no matter whether you’re an employee, a founder, or an investor. It’s true even if your company consists of just you and your computer. Look around. If you don’t see any salespeople, you’re the salesperson.

19. Man and Machine

a. The most valuable businesses of coming decades will be built by entrepreneurs who seek to empower people rather than try to make them obsolete.
b. Properly understood, technology is the one way for us to escape competition in a globalizing world. As computers become more and more powerful, they won’t be substitutes for humans: they’ll be complements.
c. if humans and computers together could achieve dramatically better results than either could attain alone, what other valuable businesses could be built on this core principle?
d. But the most valuable companies in the future won’t ask what problems can be solved with computers alone. Instead, they’ll ask: how can computers help humans solve hard problems?

20. Seeing Green

a. Most cleantech companies crashed because they neglected one or more of the seven questions that every business must answer:
b. **1. The Engineering Question:** Can you create breakthrough technology instead of incremental improvements?
c. **2. The Timing Question:** Is now the right time to start your particular business?
d. **3. The Monopoly Question:** Are you starting with a big share of a small market?
e. **4. The People Question:** Do you have the right team?

f. **5. The Distribution Question:** Do you have a way to not just create but deliver your product?
g. **6. The Durability Question:** Will your market position be defensible 10 and 20 years into the future?
h. **7. The Secret Question:** Have you identified a unique opportunity that others don't see?
i. Whatever your industry, any great business plan must address every one of them. If you don't have good answers to these questions, you'll run into lots of "bad luck" and your business will fail. If you nail all seven, you'll master fortune and succeed. Even getting five or six correct might work.
j. But the team insight— never invest in a tech CEO that wears a suit— got us to the truth a lot faster. The best sales is hidden. There's nothing wrong with a CEO who can sell, but if he actually looks like a salesman, he's probably bad at sales and worse at tech.
k. Progress isn't held back by some difference between corporate greed and nonprofit goodness; instead, we're held back by the sameness of both. Just as corporations tend to copy each other, nonprofits all tend to push the same priorities.
l. Doing something different is what's truly good for society— and it's also what allows a business to profit by monopolizing a new market. The best projects are likely to be overlooked, not trumpeted by a crowd; the best problems to work on are often the ones nobody else even tries to solve.
m. An entrepreneur can't benefit from macro-scale insight unless his own plans begin at the micro-scale.
n. Cleantech companies faced the same problem: no matter how much the world needs energy,
o. Only a firm that offers a superior solution for a specific energy problem can make money. No sector will ever be so important that merely participating in it will be enough to build a great company.

p. Finding small markets for energy solutions will be tricky— you could aim to replace diesel as a power source for remote islands, or maybe build modular reactors for quick deployment at military installations in hostile territories. Paradoxically, the challenge for the entrepreneurs who will create Energy 2.0 is to think small.

21. The Founder’s Paradox

a. The lesson for business is that we need founders. If anything, we should be more tolerant of founders who seem strange or extreme; we need unusual individuals to lead companies beyond mere incrementalism.
b. The lesson for founders is that individual prominence and adulation can never be enjoyed except on the condition that it may be exchanged for individual notoriety and demonization at any moment— so be careful.
c. Above all, don’t overestimate your own power as an individual. Founders are important not because they are the only ones whose work has value, but rather because a great founder can bring out the best work from everybody at his company.

22. Conclusion: Stagnation or Singularity?

a. But no matter how many trends can be traced, the future won’t happen on its own. What the Singularity would look like matters less than the stark choice we face today between the two most likely scenarios: nothing or something. It’s up to us. We cannot take for granted that the future will be better, and that means we need to work to create it today.
b. Our task today is to find singular ways to create the new things that will make the future not just different, but better— to go from 0 to 1. The essential first step is to think for yourself. Only by seeing our world anew, as fresh and

strange as it was to the ancients who saw it first, can we both re-create it and preserve it for the future.